19. Describe the process of creating, accessing, updating, and deleting elements in a tuple. Explain how tuples differ from lists.

20. Write a Python program to read a data file and count the number of records and data available in the given file.

APRIL/MAY 2025

23UCS31 — PYTHON PROGRAMMING

Time : Three hours Maximum : 75 marks

Shanmuga Industries Arts & Science College ★ T.V.Malai

SECTION A — (10 × 2 = 20 marks)

Answer ALL the questions.

1. Name two built-in data types in Python.

2. Which function is used to take user input in Python?

3. What is the purpose of break statement in Python?

4. What is a while loop in Python?

5. What is the difference between a function and a module in Python?

6. Write any two built-in string methods in python?

7. What is tuples in python?

8. What is a nested list? Provide an example.

9. What is the method to delete a file in Python? Provide an example.

10. How do you close a file in Python?

SECTION B — (5 × 5 = 25 marks)

Answer ALL the questions.

11. (a) Define literals and constants in Python. How are they used in programming?

Or

(b) Explain the various types of operators available in Python.

12. (a) Explain the uses of pass statement in pythons.

Or

(b) Describe the function of for loop with an example.

13. (a) What is recursion in Python? Write a simple recursive function and explain how recursion works?

Or

(b) Describe the role of the dir( ) function in Python. How can it be used to inspect the contents of a module or object?

Shanmuga Industries Arts & Science College T.V.Malai

14. (a) Discuss basic list operations in Python. Provide examples for each operation.

Or

(b) Explain how to create a dictionary in Python with an example.

15. (a) Describe the function write( ) and writelines( ) with an example.

Or

(b) Discuss the methods for renaming a file in pthyon.

SECTION C — (3 × 10 = 30 marks)

Answer any THREE questions.

16. Discuss how arrays are defined and processed in Python.

17. Explain the syntax and working of the if, if-else, and if-elif-else statements with examples.

18. What are string operations in Python? Illustrate with examples.